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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,468	10/17/2003	Peter D. Condo	55027US010	3046

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EXAMINER	
DINH, JACK	

ART UNIT	PAPER NUMBER
2873	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/688,468	CONDO ET AL.	
	Examiner	Art Unit	
	Jack Dinh	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *0104*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *DETAILED ACTION*.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Jonza et al. (U.S. Patent No. 5,882,774).

(a) Regarding claims 1 and 12, figure 1b of Jonza et al is interpreted as disclosing an optical body **10** comprising a plurality of first optical layers **12**, each first optical layer being oriented and comprising a polyester (col. 2, lines 63-66) having terephthalate comonomer units (col. 3, lines 44-56) and ethylene glycol comonomer units (col. 1, lines 34-42; & col. 5, lines 9-15), and a plurality of second optical layers **14** disposed repeating sequence with the plurality of first optical layers, each second optical layer comprising a copolymer of polymethyl methacrylate (col. 16, line 67) that contains comonomer units that depress a glass transition temperature of the copolymer below a glass transition temperature of the polyester of the first optical layers (col. 3, lines 65-67; & col. 4, lines 1-7), the optical body being configured and arranged to reflect at least a portion of light over at least one wavelength region (col. 1, lines 49-53; col. 4, lines 18-27; & fig. 4).

(b) Regarding claim 2, Jonza et al. (col. 6, lines 10-13) is interpreted as further disclosing that the comonomer units are selected from ethyl acrylate, butyl acrylate, n-butyl methacrylate, and ethyl methacrylate.

(c) Regarding claim 3, Jonza et al. (col. 3, lines 32-44) is interpreted as further disclosing that the first optical layers have an in-plane birefringence of at least about 0.05.

(d) Regarding claim 4, Jonza et al. (col. 3, lines 8-33 & fig. 2) is interpreted as further disclosing that at least one in-plane index of refraction of the first optical layers differs by at least about 0.1 from an in-plane index of refraction, in the same direction, of the second optical layers.

(e) Regarding claims 5 and 14, Jonza et al. (col. 1, lines 49-53; col. 4, lines 18-27; & fig. 4) is interpreted as further disclosing that the optical body is configured and arranged to reflect at least a substantial portion of light in a visible wavelength region.

(f) Regarding claim 6, Jonza et al. (col. 7, lines 37-67 & col. 8, lines 1-2; spectral shifts with angle) is interpreted as disclosing that the optical body has a blue appearance that shifts to red as the viewing angle increases with respect to normal incidence.

(g) Regarding claims 7 and 13, Jonza et al. (col. 1, lines 49-53; col. 4, lines 18-27; col. 11, lines 1-4 & fig. 5) is interpreted as further disclosing that the optical body is configured and arranged to reflect a substantial portion of light in an infrared wavelength region.

(h) Regarding claim 8, Jonza et al. (col. 1, lines 44-57) is interpreted as further disclosing that the first polyester is polyethylene terephthalate.

(i) Regarding claim 9, Jonza et al. (col. 5, lines 8-9) is interpreted as further disclosing that the first and second optical layers are coextruded.

(j) Regarding claim 10, Jonza et al. (col. 5, lines 28-38) is interpreted as further disclosing that the first optical layers are biaxially oriented.

(k) Regarding claim 11, Jonza et al. (col. 11, lines 16-23) is interpreted as further disclosing that the z-axis refractive indices of the first and second optical layers differ by no more than about 0.04.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonza et al. (U.S. Patent No. 5,882,774).

(a) Regarding claim 16, figure 1b of Jonza et al is interpreted as disclosing an optical body **10** comprising a plurality of first optical layers **12**, each optical being oriented and comprising a polyester (col. 2, lines 63-66) having terephthalate comonomer units (col. 3, lines 44-56) and ethylene glycol comonomer units (col. 1, lines 34-42; & col. 5, lines 9-15), and a plurality of second optical layers **14** disposed repeating sequence with the plurality of first optical layers, each second optical layer comprising a copolymer of polymethyl methacrylate (col. 16, line 67) that contains comonomer units that depress a glass transition temperature of the copolymer below a glass transition temperature of the polyester of the first optical layers (col. 3, lines 65-67; & col. 4, lines 1-7), the optical body being configured and arranged to reflect at least a portion of light over at least one wavelength region (col. 1, lines 49-53; col. 4, lines 18-27; & fig. 4). Jonza et al is interpreted as disclosing all the claimed limitation except for the presence of a light source. Since the invention relates to multilayer optical bodies that reflect light, it would have been obvious, or necessary, to provide a light source. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a light source, for the purpose of irradiating light to the multilayer optical bodies.

(b) Regarding claim 17, Jonza et al. (col. 1, lines 49-53; col. 4, lines 18-27; col. 11, lines 1-4 & fig. 5) is interpreted as further disclosing that the optical body is configured and arranged to reflect a substantial portion of light in an infrared wavelength region.

(c) Regarding claim 18, Jonza et al. (col. 1, lines 49-53; col. 4, lines 18-27; & fig. 4) is interpreted as further disclosing that the optical body is configured and arranged to reflect at least a substantial portion of light in a visible wavelength region.

(d) Regarding claim 20, Jonza et al. (col. 11, lines 16-23) is interpreted as further disclosing that the z-axis refractive indices of the first and second optical layers differ by no more than about 0.04

3. Claims 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonza et al. (U.S. Patent No. 5,882,774), as applied in claims 12 and 16, in view of the Applicant's submitted prior art.

Regarding claims 15 and 19, Jonza et al. is interpreted as disclosing all the claimed limitations, as described above in claims 12 and 16, except that the mirror or the optical body is configured and arranged to reflect a substantial portion of light in an ultraviolet wavelength region. However, Jonza et al. (col. 1, lines 49-53; col. 4, lines 18-27; & fig. 4) is interpreted as disclosing that the optical body is configured and arranged to reflect at least a substantial portion of light in a visible wavelength region. Furthermore, the Applicant's submitted prior art (page 1, lines 25-26) discloses that polymeric films are used in a wide variety of applications, one of which is in mirrors

which reflect light over a particular wavelength range. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the ultraviolet region, for the purpose of protecting other films from UV light to prevent deleterious effects.

Other Information/Remarks

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Dinh whose telephone number is 571-272-2327. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jack Dinh

Scott J. Sugarman
Primary Examiner